

CLAIMS

What is claimed is:

1. An apparatus, comprising:
5 a metallic substrate;
an electroless nickel layer disposed over the metallic substrate; and
an outer electrolytic nickel layer disposed over the electroless nickel layer.
2. The apparatus as recited in claim 1, comprising:
10 an inner electrolytic nickel layer disposed over the metallic substrate, wherein the
electroless nickel layer is disposed over the inner electrolytic nickel layer.
3. The apparatus as recited in claim 1, wherein the electroless nickel layer
comprises phosphorous.
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4. The apparatus as recited in claim 1, comprising a polymeric coating layer
disposed over the outer electrolytic nickel layer.
5. The apparatus as recited in claim 1, wherein the metallic substrate is a
20 bearing component.
6. The apparatus as recited in claim 1, wherein the outer electrolytic nickel
consists essentially of nickel.
7. An anti-friction bearing assembly, comprising:
25 a bearing component, comprising a metallic substrate;
a layer comprising phosphorus disposed over the metallic substrate; and

an outer layer consisting essentially of nickel disposed over the layer comprising phosphorous.

8. The anti-friction bearing assembly as recited in claim 7, comprising an inner layer consisting essentially of nickel disposed over the metallic substrate, wherein the layer comprising phosphorus is disposed over the inner layer consisting essentially of nickel.

9. The anti-friction bearing assembly as recited in claim 7, wherein the layer comprising phosphorous comprises nickel.

10. The anti-friction bearing assembly as recited in claim 7, comprising a polymeric coating disposed over the outer layer consisting essentially of nickel.

11. A method of manufacturing a corrosion-resistant product, comprising:
applying a layer comprising phosphorous over a metallic substrate; and
applying an outer layer comprising nickel over the layer comprising phosphorous.

12. The method as recited in claim 11, wherein applying a layer comprising phosphorous comprises using an autocatalytic plating process to apply the layer comprising phosphorous.

13. The method as recited in claim 12, wherein using an autocatalytic plating process comprises disposing the metallic substrate in a solution comprising phosphorous and nickel.

14. The method as recited in claim 11, wherein applying an outer layer comprising nickel comprises using an electroplating process to apply the outer layer comprising nickel.

15. The method as recited in claim 14, wherein the electroplating process comprises Wood's nickel strike.

5 16. The method as recited in claim 11, comprising applying an inner layer comprising nickel over the metallic substrate, wherein the layer comprising phosphorous is applied over the inner layer comprising nickel.

10 17. The method as recited in claim 16, wherein applying an inner layer comprising nickel comprises using an electroplating process to apply the inner layer comprising nickel.

18. The method as recited in claim 11, comprising forming the metallic substrate.

15 19. The method as recited in claim 11, wherein forming the metallic substrate comprises forming the metallic substrate for use as a bearing component.

20 20. A method of manufacturing a corrosion-resistant product, comprising:
applying a first layer to a surface of a product using Wood's nickel strike;
applying a second layer over the first layer using an electroless plating process; and
applying a third layer over the second layer using Wood's nickel strike.

25 21. The method as recited in claim 20, wherein applying a second layer over the first layer using an electroplating plating process comprises disposing the product in a solution comprising nickel and phosphorous.

22. The method as recited in claim 20, comprising applying a polymeric layer over the third layer.

23. An apparatus, comprising:
a metallic substrate;
a first Wood's nickel strike layer disposed over the metallic substrate;
an electroless nickel layer disposed over the first Wood's nickel strike layer; and
5 a second Wood's nickel strike layer disposed over the electroless nickel layer.

24. The apparatus as recited in claim 23, wherein the metallic substrate
comprises an inner ring of a bearing assembly.

10 25. The apparatus as recited in claim 23, wherein the metallic substrate
comprises an outer ring of a bearing assembly.

26 The apparatus as recited in claim 23, comprising:
a polymeric layer disposed over the second Wood's nickel strike layer.

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